

REMARKS

This application is amended in a manner to place it in condition for allowance.

Status of the Claims

Claims 1, 12-19 and 26 are amended to address formal matters, e.g., change "characterize in that" to "wherein".

Claims 1 and 12 are amended substantively.

In claim 1, the expression "one of the bond between carbon 5 and 6 and the bond between carbon 7 and 8 may be a double bond, whereas the other is a single bond" was replaced with the expression "the bond between carbon 7 and 8 is a single bond or a double bond". Accordingly, the expression "in which the two bonds C5-C6 and C7-C8 are single bonds" was replaced with the expression "in which the bond C7-C8 is a single bond". The following redundant recitation previously added was deleted:

a compound corresponding to formula (I) in which the bond between carbons C₇ and C₈ is a double bond, R = NH-(CH₂)₂-NH-(CH₂)₃-NH₂ and T₁ = T₂ = T₃ = H,

In claim 12, the radical Z was added in formula (III), along with the definition: Z represents, in position 5 or 8, either H or OH, OH being borne only by a carbon that does not bear a double bond, i.e., as consistent with page 4, lines 10-13, and the compound described in claim 1. Also, in

order to be consistent with claim 1, the expression "one of the bond between carbon 5 and 6 and the bond between carbon 7 and 8 may be a double bond, whereas the other is a single bond" was replaced with the expression "the bond between carbon 5 and 6 is a single bond or a double bond".

Claims 1, 12-19 and 26 remain in this application.

Claim Rejections-35 USC §112

Claims 12-18 were rejected under 35 U.S.C. §112, first paragraph for not complying with the enablement requirement. This rejection is respectfully traversed for the reasons below.

The position of the Official Action was that the specification, while enabling for solvents A, B, C and E and activator D as set forth in the present specification and instant claims 14-18, does not reasonably provide enablement for all solvents and activators.

According to the Official Action, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

However, in the presently claimed process, solvents are used to perform a chemical reaction comprising two steps:

- a) reacting meta-chloroperoxybenzoic acid with a compound of formula (III) to obtain an epoxy compound, and

- b) reacting said epoxy compound with an amine.

More precisely:

- solvent A is used to dissolve meta-chloroperoxybenzoic acid,
- solvent B is used to dissolve compound of formula (III),
- solvent C is used to dissolve the epoxy compound, and
- solvent E is used to dissolve the amine.

Claim 1 further provides that solvent B is miscible with solvent A and that solvent E is miscible with solvent C.

Claims 15-18, as well as the specification, provide that:

- solvent A may be methylene chloride
- solvent B may be methylene chloride or a mixture of methylene chloride and aqueous Na₂CO₃,
- solvent C may be an ethanolic solution, anhydrous ethanol or pyridine, and
- solvent E may be anhydrous ethanol.

Activator D is used to activate step b) of the process. It may be lithium perchlorate.

The Official Action alleged that there is a lack of guidance in the specification as to other solvents falling within the scope of solvent A, B, C and E and activator D.

Applicant respectfully disagrees for the following reasons.

The amount of product dissolved in a solvent depends not only on the type of solvent, but also on the volume of solvent or the temperature of the solvent. The applicant has

provided in the specification examples of solvents that may be used in the claimed process. These solvents allow the reaction to be performed under good conditions, i.e. with reasonable volumes of solvents (not too much) and at room temperature. But other solvents may also be used. Depending on the solvent, the person skilled in the art only needs to adjust the volume or temperature of the solvent to obtain complete dissolution of the product to be reacted. It is to be emphasized that the claimed process is not limited to any particular volume of solvent, neither to any particular temperature or any particular yield.

Therefore, the claimed process and the present specification are enabling.

Now turning to activator D, it is used as a catalyst in the reaction between the epoxy compound and the amine. This type of reaction is well-known by the person skilled in art. For example, Chini M. et al. (1990) (copy enclosed) provides examples of catalysts for aminolysis of oxiranes, i.e. 1,2-epoxides.

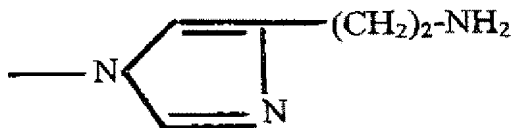
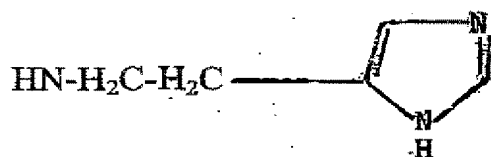
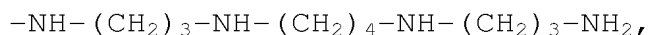
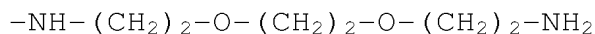
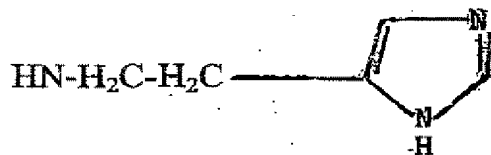
Therefore, the claims are enabled and withdrawal of the rejection is respectfully requested.

Claims 12-18 were rejected under 35 U.S.C. §112, first paragraph for not complying with the written description

requirement. This rejection is respectfully traversed for the reasons below.

The position of the Official Action was that the claims are inclusive of amines not described in the specification as originally filed because of the utilization of an "amine" (and not an amine of formula Q0Q1, Q0 and Q1 having the meanings given in claim 1).

However, it is to be noted that claim 12 further provides that said amine is the amine selected from the group consisting of:



, and



These amines are implicit from the compounds recited claim 1 and are encompassed within the definition of Q0Q1 given in initial claim 1.

Therefore, the claims do comply with the written description requirement, and withdrawal of the rejection is respectfully requested.

Claims 1, 12-19 and 26 were rejected under 35 U.S.C. §112, second paragraph for being indefinite. This rejection is respectfully traversed for the reasons below.

With respect to solvents A, B, C, E and activator D in claim 12:

The terms "solvent" and "activator" are basic chemical terms which are perfectly clear for the man skilled in the art.

- "Solvent" means a liquid used to dissolve a substance to convert it to a liquid and place it in solution.
- "Activator" means a substance that increases the reactivity of another substance in order to accelerate a reaction.

According to the claimed process, all solvents can be used as long as they can dissolve meta-chloroperoxybenzoic acid (solvent A), dissolve compound of formula (III) (solvent B), dissolve the epoxy compound (solvent C), dissolve the amine (solvent E) and that solvent B is miscible with solvent A and that solvent E is miscible with solvent C. It is to be noted that the claimed process is not limited to any

particular volume of solvent, neither to any particular temperature or any particular yield.

Therefore, solvents A, B, C, E and activator D are definite terms.

With respect to the expression "with CH₃ in the alpha and/or beta position" in claim 1:

According to the nomenclature of steroids, the position of an atom or a group is termed:

- alpha if it lies below the plane of the paper on which is represented the molecule,
- beta if it lies above the plane of the paper on which is represented the molecule.

According to claim 1, T1 and T 2 are independently H or CH₃, which lead to three options:

- T1 = T2 = H
- T1 = T2 = CH₃,
- T1 (or T2) = H and T2 (or T1) = CH₃.

In options 1) and 2), the alpha or beta position does not matter since T1 and T2 are identical.

In option 3), if CH₃ is in alpha position, then H is necessarily in beta position. Conversely, if CH₃ is in beta position, then H is necessarily in alpha position. In other words, H is necessarily in the opposite position relatively to CH₃.

Therefore, the expression "with CH₃ in the alpha and/or beta position" is definite.

With respect to the other indefinite terms:

The expression "characterized in that" has been replaced by wherein.

The expression "in which the two bonds C5-C6 and C7-C8 are single bonds" was replaced with the expression "in which the bond C7-C8 is a single bond".

The duplicate recitation has been removed.

Therefore, withdrawal of the indefinite rejection is respectfully requested.

Conclusion

In view of the amendment to the claims and the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our credit card which is being paid online simultaneously herewith for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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